

BLUE EARTH COUNTY HIGHWAY DEPARTMENT

CONSTRUCTION PLAN FOR BITUMINOUS
OVERLAY & AGGR. SHOULDER

COUNTY STATE AID HIGHWAY NO.28

BETWEEN:T.H 83 & CSAH 15, & CSAH 15 &

S. END OF BRIDGE

FROM:A PT 1020.15' S. OF THE N 1/4 COR OF

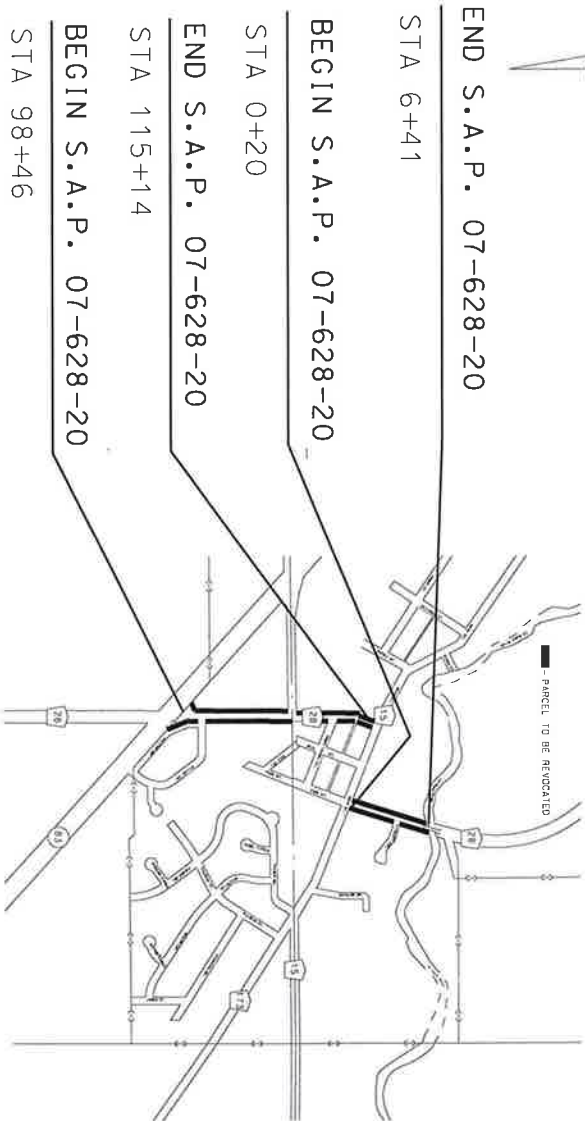
SEC. 17-107-25

TO:A PT 1584.4' S. & 875.7' E. OF THE

CENTER OF SEC. 8-107-25

GROSS LENGTH 2289.00 FEET 0.434 MILES
BRIDGE LENGTH 000.00 FEET 0.000 MILES
NET LENGTH 2289.00 FEET 0.434 MILES

OVERLAYED IN:1992 UNDER SAP 07-628-15
SURFACED IN: 1979 UNDER SAP 07-628-09
GRADED IN:1979 UNDER SAP 07-628-09



R 25 W

DESIGN DESIGNATION

ADT (Current Year) 401 2012
ADT (Future Year) 642 2032
ADT (Heavy Commercial)
ESAL 61,000
10 TON DESIGN
R-VALUE 10
DESIGN SPEED 30 MPH
DESIGN SPEED NOT ACHIEVED AT:
SOIL FACTOR 130 STA 98+46 TO STA 115+14
SOIL FACTOR 100 STA 0+20 TO STA 6+41
SHOULDER WIDTH
STOPPING SIGHT DISTANCE BASED ON
3.5' HEIGHT OF EYE
0.5' HEIGHT OF OBJECT
GOVERNING SPECIFICATIONS

INDEX OF SHEETS

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PLAN NOT TO SCALE

ALL APPLICABLE FEDERAL, STATE AND LOCAL LAWS AND ORDINANCES WILL BE
COMPLIED WITH, IN THE CONSTRUCTION OF THIS PROJECT.

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED
BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED
PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Alan Forsberg
COUNTY ENGINEER ALAN FORSBERG

DATE 05/12/12 I.C. No. 14720

Robert Forsberg
DISTRICT STATE AID ENGINEER REVIEWED FOR
COMPLIANCE WITH STATE-AID RULES/REGS. DATE 3/12/2012

Robert Forsberg
STATE ENGINEER APPROVED FOR STATE AID FUNDING DATE 3/12/2012

S.A.P. 07-628-20 SHEET NO. 1 OF 6 SHEETS

ESTIMATED QUANTITY

ITEM NO.	ITEM	UNIT	CSAH #28	NON PART.	TOTAL
2232.501	MILL BITUMINOUS SURFACE	50 YD	3560	0	3560
(1)	2357.502 BITUMINOUS MATERIAL FOR TACK COAT	GAL	1042	0	1042
(1)	2360.609 BITUMINOUS MATERIAL FOR MIXTURE (PG 58-28)	TON	66	0	66
(1)	2360.609 BITUMINOUS AGGREGATE (CLASS "A" INTERMEDIATE)	TON	378	0	378
(1)	2360.609 BITUMINOUS AGGREGATE (CLASS "A" FINE)	TON	324	0	324
(1)	2360.609 BITUMINOUS AGGREGATE (GRAVEL INTERMEDIATE)	TON	270	0	270
(1)	2360.609 BITUMINOUS AGGREGATE (GRAVEL FINE)	TON	108	0	108
(1)	2360.609 BITUMINOUS (PRODUCE, HAUL, & LAY)	TON	1148	0	1148
(1)(2)	2506.522 ADJUST FRAME & RING CASTING	EACH	1	0	1
(3)	2580.501 TEMPORARY LANE MARKING	LIN FT	183	0	183

- (1) BASIS OF PAYMENT SPECIFIED IN SPEC. 1903 SHALL BE MODIFIED TO PRECLUDE ANY PRICE ADJUSTMENT FOR INCREASED OR DECREASED QUANTITIES.
- (2) APPROXIMATE: 1 MANHOLE, CONCRETE OR CAST IRON ADJUSTMENT RINGS SHALL BE APPROVED BY THE ENGINEER PRIOR TO RAISING.
- (3) PLACED ON EVERY LIFT, REMOVED BEFORE NEXT LIFT AND PRIOR TO STRIPING.

CERT. BY Alan Forsberg L.I.C. NO. 14720 MAR. 10, 2012 S.A.P. 07-628-20 SHEET NO. 2 OF 6 SHEETS

PROFESSIONAL ENGINEER

BASIS FOR PLANNED QUANTITIES

BITUMINOUS SURFACE

BITUM. MAT'L FOR TACK COAT 0.05 GALS. PER SQ. YD.

BITUM. MAT'L FOR WEAR COURSE AC (PG 58-28) 5.8% BY WEIGHT

BITUM. COURSES, 110 LBS. PER 1" / SQ. YD.

AGGREGATE PROPORTIONS : 35% CLASS "A" INTERMEDIATE

30% CLASS "A" FINE

25% GRAVEL INTERMEDIATE

10% GRAVEL FINE

THE FOLLOWING STANDARD PLATES AS APPROVED BY THE FHWA SHALL APPLY

STANDARD PLATES	
PLATE NO.	DESCRIPTION
4108F 80001	ADJUSTING RINGS STANDARD BARRICADES

CERT. BY

Alan Fendberg
PROFESSIONAL ENGINEER

LIC. NO. 14720 MAR. 10, 2012

S.A.P. 07-628-20

SHEET NO. 3 OF 6 SHEETS

CSAH 28 SUPERPAVE BITUM. CALCULATIONS

		LOCATION	LENGTH FEET	AVER WIDTH FEET	DEPTH INCHES	WEAR TON	BINDER TON	BITUM MAT'L TON	TACK COAT GAL
BITUM. WEAR									
STA	98 + 46 TO STA	115 + 14	1668	41	1	418		24.2	380
STA	98 + 46 TO STA	115 + 14	1668	41	1	418		24.2	380
STA	0 + 20 TO STA	6 + 41	621	41	1	156		9	141
STA	0 + 20 TO STA	6 + 41	621	41	1	156		9	141
TOTAL			1148	0	66	1042			

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CSAH 28 SUPERPAVE BITUM. QUANTITIES

	MIX TONS	BITUM MAT'L 5.8% TON	TOTAL AGGR. TONS	BITUM CL. "A" INTERM 35% TON	BITUM CL. "A" FINE 30% TON	BITUM GRAVEL INTERM 25% TON	BITUM GRAVEL FINE 10% TON	PRODUCE HAUL LAY TON
WEAR	1,148	67	1,081	378	324	270	108	1,148
TOTAL			378	324	270	108		1,148

MILL BITUM. SURFACE

SAP 07-628-20

STATION TO STATION	LOC.	LENGTH	WIDTH	SQ.YD.
98 + 46 TO 115 + 14	RT	1,668	7	1,297
98 + 46 TO 115 + 14	LT	1,668	7	1,297
0 + 20 TO 6 + 41	RT	621	7	483
0 + 20 TO 6 + 41	LT	621	7	483
TOTAL				3,560

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TAPER FROM LIP OF C&G STARTING AT DEPTH OF 1" OUT TO 0" IN 7'
THE MILLINGS SHALL BE HAULED TO PRANGE PT, SEE
SPECIAL PROVISIONS.

SUPERPAVE & MILLING QUANTITIES

CERTIFIED BY

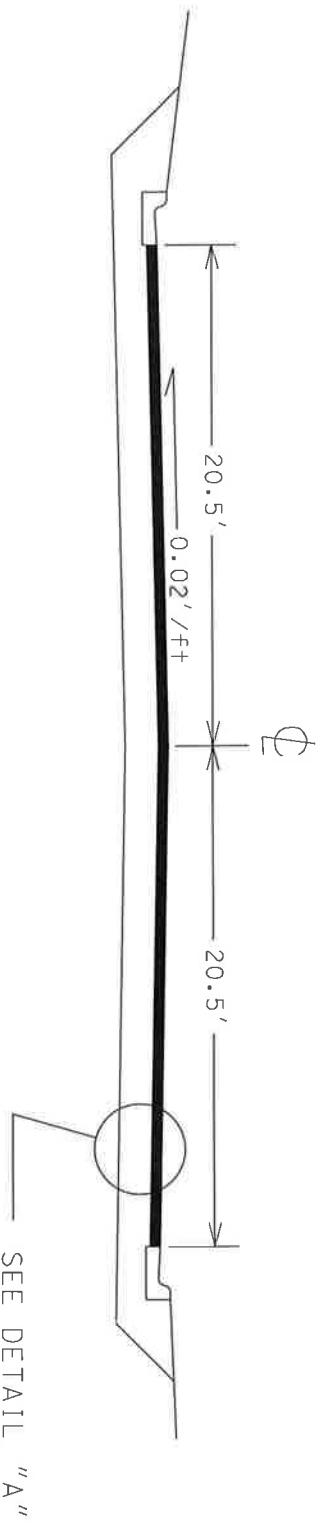
Alan Forberg

LIC. NO. 14720 MAR. 10, 2012

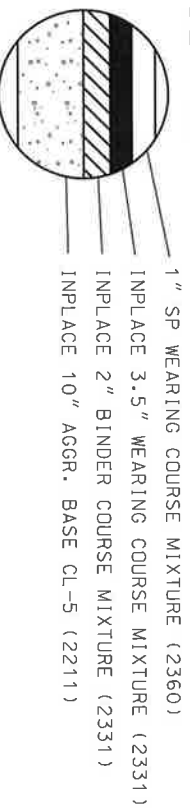
S.A.P. 07-628-20 SHEET No. 4 OF 6 SHEETS

TYPICAL SECTION

STA 98 + 46 TO STA 115 + 14 (T.H. 83 TO CSAH 15)
 STA 0 + 20 TO STA 6 + 41 (CSAH 15 TO BRIDGE)

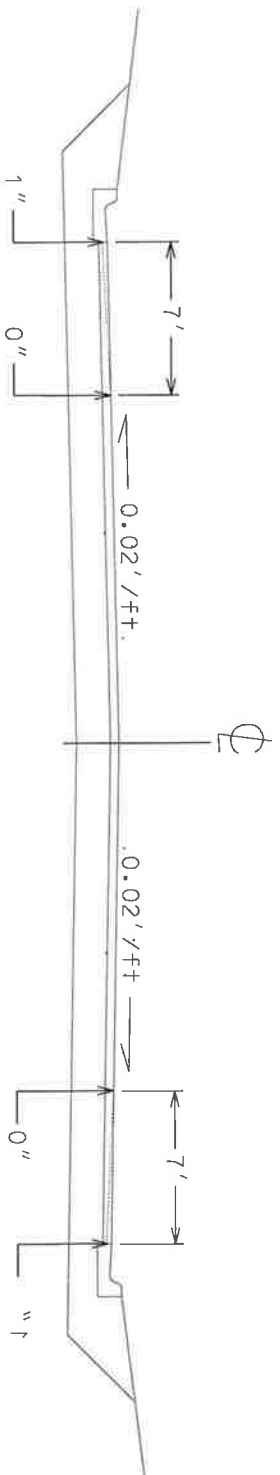


DETAIL "A"



TYPICAL MILL SECTION DETAIL

STA 98 + 46 TO STA 115 + 14 (T.H. 83 TO CSAH 15)
 STA 0 + 20 TO STA 6 + 41 (CSAH 15 TO BRIDGE)



CERT. BY Alan Fowling PROFESSIONAL ENGINEER LIC. NO. 14720 MAR. 10, 2012 S.A.P. 07-628-20 SHEET NO. 6 OF 6 SHEETS